

# ICC Summer Preparedness Policy Session

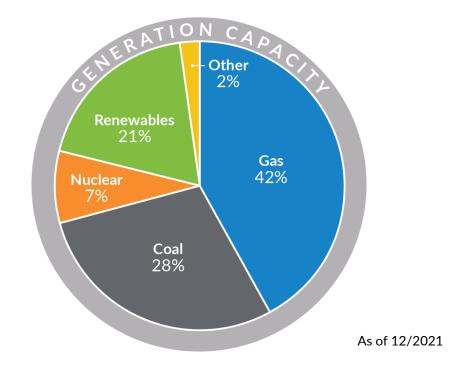
June 13th, 2022

## MISO drives value creation through efficient and reliable markets, operations, planning, and innovation



MISO's reliability footprint and locations of regional control centers.

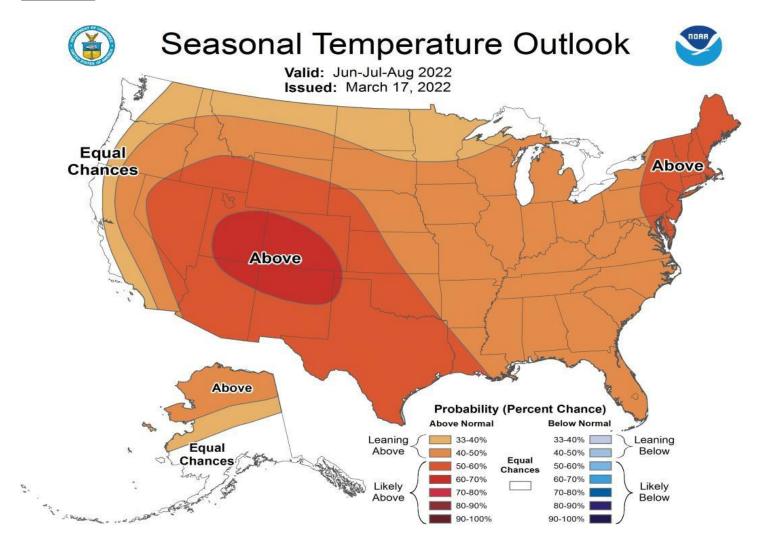
MISO by the numbers		
High Voltage Transmission	65,800 miles*	
Generation Capacity	184,287 MW	
Peak Summer System Demand	127,125 MW	
<b>Customers Served</b>	42 Million	





### What are the vendors saying?

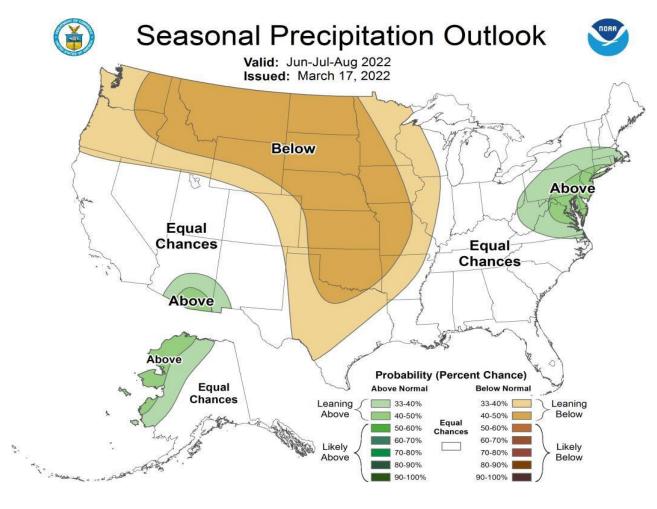
### **NOAA**





### **Precipitation Outlook**

### **NOAA**



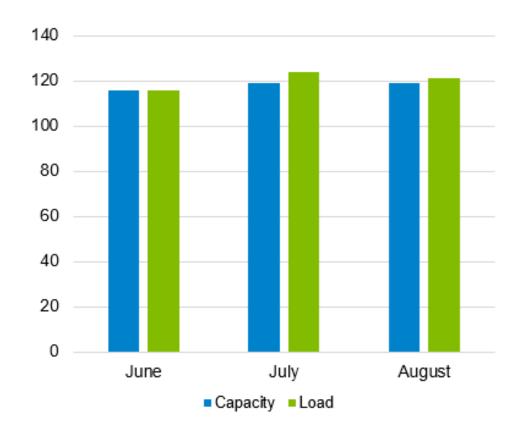
### Precipitation Forecast

NOAA forecasts
below average
precipitation
across most of
Zones 1 through 5
and Zone 8 while it
is expected that
the remainder of
the footprint will
see average
precipitation levels



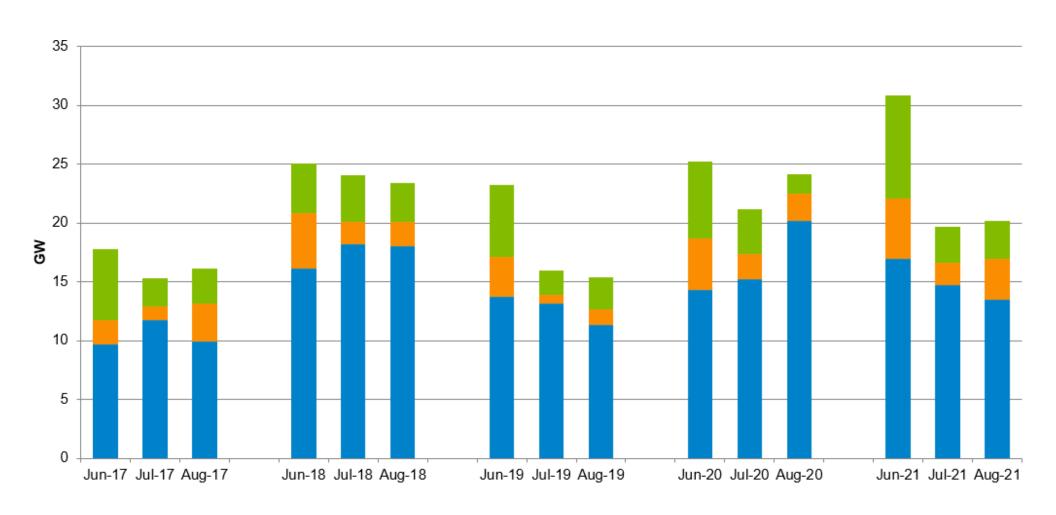
## Under typical demand and outage scenarios, firm resources are projected to be insufficient to cover peak load of summer months

MISO 2022 Base Summer Forecast		
June Probable Peak Load Forecast	116 GW	
June Projected Available Capacity*	116 GW	
July Probable Peak Load Forecast	124 GW	
July Projected Available Capacity*	119 GW	
August Probable Peak Load Forecast	121 GW	
August Projected Available Capacity*	119 GW	



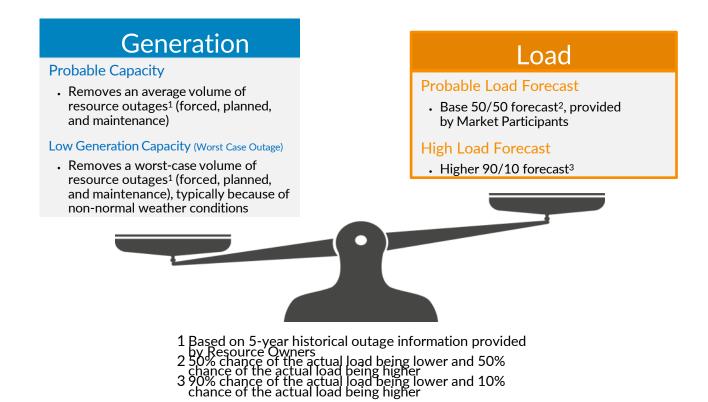


### New maximum seasonal peak for cumulative generation outages occurred in June 2021



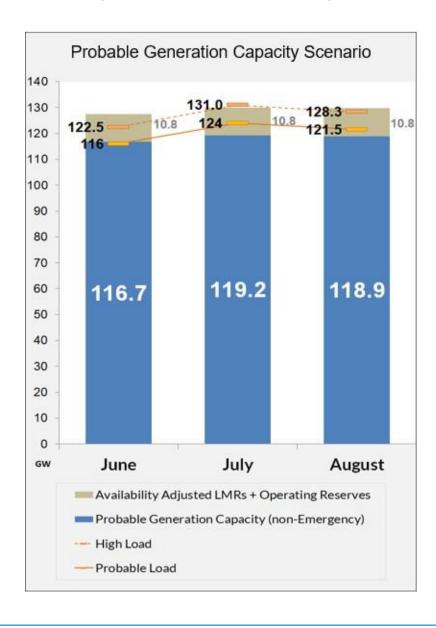


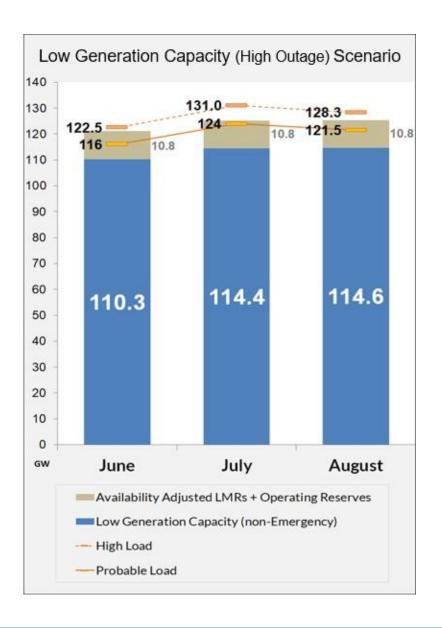
## Two deterministic scenarios (typical and worst case) are evaluated to capture potential risk for this upcoming summer





## Energy resources and non-firm energy imports will be needed to maintain system reliability







MISO prepares for extreme conditions in advance. In Real-Time, unplanned outages and other unknowns may require additional actions

Take Actions to ensure reliability

and avoid Load Shed

#### Load Management Review load obligations against available resources and system conditions Operating Reserves Curtail Schedules **Emergency Purchases** Reconfiguration **Options** Generation Outages Rescheduled **Emergency Generation** Long-Lead Generation Restored all Possible **Transmission Outages** Commitments **Shortage** Load Cons Ops / Alerts **Ops Planning** Warning / Event



## As upcoming operating conditions tighten, MISO procedures guide system operators as they maintain reliable operations

Capacity Advisory	Advance notice of forecasted capacity shortage, requests     Stakeholders update offer data	
Alert	<ul> <li>Define boundaries/suspend maintenance, set Emergency Pricing Tier 0 Offer Floor</li> </ul>	Emergency Pricing Tier 0
Warning	Schedule in External Resources, Curtail export transactions,     Reconfiguration, and set Emergency Pricing Tier 1 Offer Floor	Emergency Pricing Tier 1
Step 1	<ul> <li>Commit Emergency Resources, Declare NERC EEA 1, Activate Emergency Limits</li> </ul>	Offer Floor
Step 2	<ul> <li>Declare NERC EEA 2, Implement LMRs, LMMs Stage 1, Commit EDR Resources, Emergency Energy Purchases, Public Appeals, and set Emergency Pricing Tier 2 Offer Floor</li> </ul>	
Step 3	Utilize Operating Reserves, and LMMs Stage 2	Emergency Pricing Tier 2 Offer Floor
Step 4	Reserve Call and Emergency Reserve Purchases	
Step 5	<ul> <li>Declare NERC EEA 3, Firm Load Shed, and set LMPs and MCPs to the VOLL</li> </ul>	VOLL Pricing
Termination	Max Gen and, possibly, Capacity Advisory Termination	



## Real-Time Market and Operations Display is available via the MISO website and Mobile App

